

### ABSTRACT OF THE DISCLOSURE

In an electrosurgical system which is operable within the frequency range of from  
5 100kHz to 50MHz and which has a handheld instrument with an elongate instrument  
shaft, the distal end of the shaft carries a bipolar electrode assembly for use in a  
conductive fluid field. The electrode assembly has an active electrode and, set back  
from the active electrode, a return electrode coated with an insulative dielectric layer.  
The insulative layer may be made of a plastics or a ceramic material and acts as the  
10 dielectric of a capacitor when the electrode assembly is immersed in the conductive  
fluid. One of the effects of the insulative layer is to provide a more uniformly  
distributed electric field over the return electrode than is obtained with an exposed  
return electrode, yielding improved tissue desiccation and vaporisation characteristics.  
The active electrode may have a similar dielectric covering.